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New active galactic nuclei among the INTEGRAL and SWIFT X-ray sources

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Abstract

We present the results of our optical identifications of a set of X-ray sources from the INTEGRAL and SWIFT all-sky surveys. The optical data have been obtained with the 1.5-m Russian-Turkish Telescope (RTT-150). Nine X-ray sources have been identified with active galactic nuclei (AGNs). Two of them are located in the nearby spiral galaxies MCG-01-05-047 and NGC 973 seen almost edge-on. One source, IGR J16562-3301, is probably a BL Lac object (blazar). The remaining AGNs are observed as the starlike nuclei of spiral galaxies whose spectra exhibit broad emission lines. The relation between the hard X-ray (17-60 keV) luminosity and the [O III] 5007 line luminosity, log L x/L [O III] ≈ 2.1, holds good for most of the AGNs detected in hard X rays. However, the luminosities of some AGNs deviate from this relation. The fraction of such objects can reach ~20%. In particular, the [O III] line flux is lower for two nearby edge-on spiral galaxies. This can be explained by the effect of absorption in the galactic disks. © 2008 Pleiades Publishing, Ltd.

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Keywords

Active galactic nuclei, Gamma-ray sources, Optical observations, X-ray sources